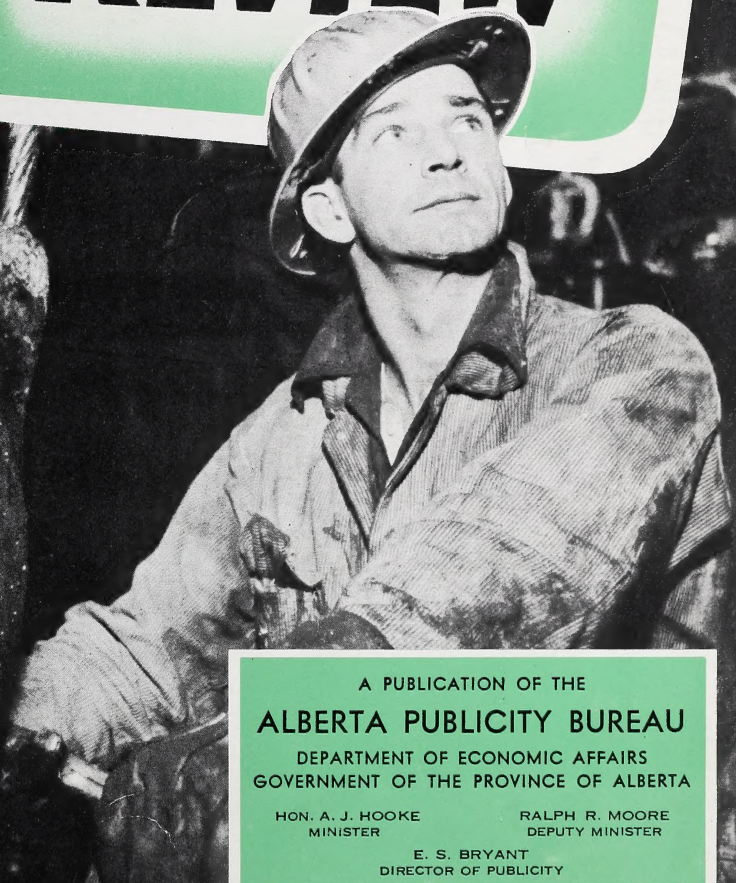


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A45
1948



1948 *Alberta* **OIL** **REVIEW**




A PUBLICATION OF THE
ALBERTA PUBLICITY BUREAU

DEPARTMENT OF ECONOMIC AFFAIRS
GOVERNMENT OF THE PROVINCE OF ALBERTA

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Alberta 1948 Oil Review

COMPILED BY
DEPARTMENT OF ECONOMIC AFFAIRS

THE new high made by Alberta oil production in 1948 stands out in all the bolder relief by being against a background of declining production which set in in July, 1942.

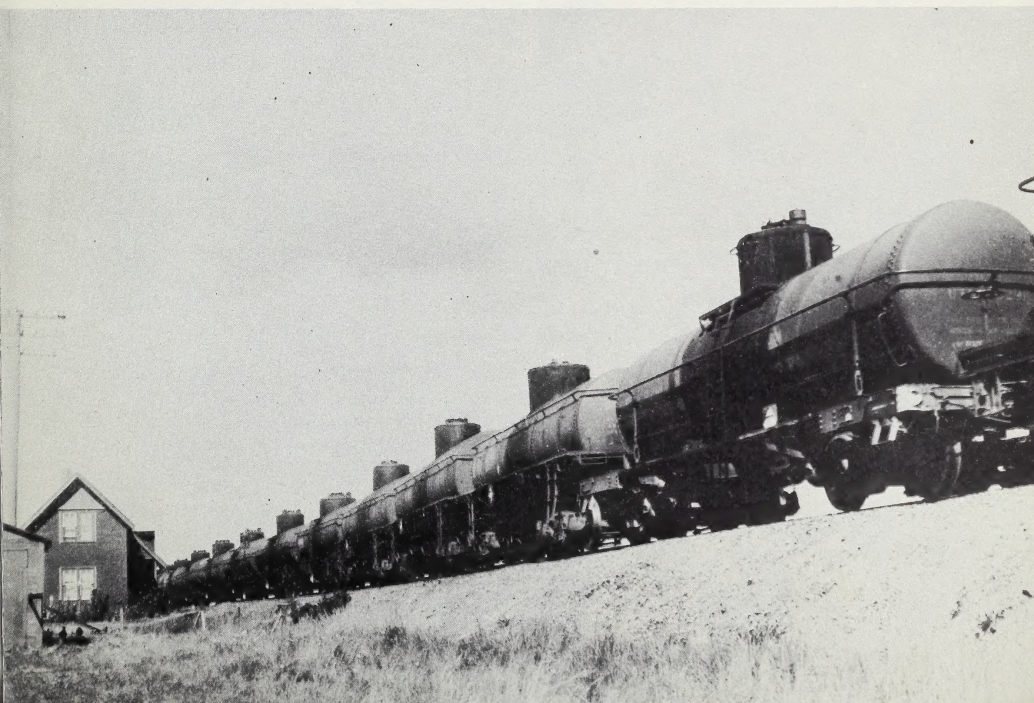
The 1948 output attained the record level of 10,973,583 barrels, approximately four million barrels more than the preceding year and better by about 800,000 barrels than the 1942 record of 10,136,296 barrels.

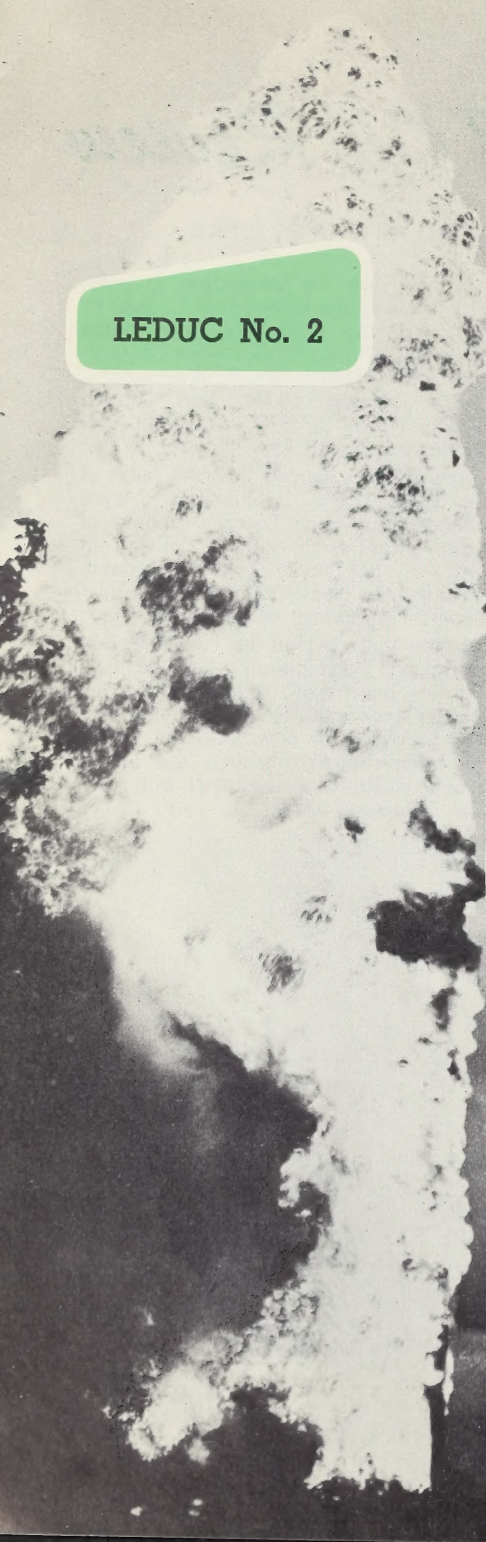
In the former year the Turner Valley field south and southwest of Calgary produced what was for all practical purposes the whole of Canada's oil for of these ten million barrels only 132,361 were produced from nine other Alberta fields. In the same year only Ontario and New Brunswick (apart from Alberta) were producing any oil at all, and their combined production amounted to less than 172,000 barrels for the year.

It may now be interesting to note, and to compare with Table D, that in that year the production from fields other than Turner Valley were: Vermilion, 56,819; Taber, 29,819; Wainwright, 14,510; Princess, 10,478; Red Coulee, 10,107; Tilley, 5,718; Dina, 2,780; Del Bonita, 1,653, and Lloydminster, 477.

It will be observed that the least of the "other fields" here shown, Lloydminster, has since become a field of major importance with an output in 1948 of 648,000 barrels. Indeed, amongst the heavy oil fields it is now the most important of them all.

In the same period the Turner Valley output has been steadily declining, but this has been more than offset by the greater production in other fields and the discovery of new fields of which the most remarkable was the Leduc which made a sensational entry on 13th February, 1947.






Leduc

LEDUC No. 2

In January of the year under review, eleven months after its kick-in, the Leduc field produced 122,297 barrels in one month as compared with Turner Valley's leadership at 466,429 barrels. But by June, when the month's production for Leduc was 398,829 barrels, it overtook the Turner Valley field and surpassed it by a margin of 27,524 barrels. By November the Leduc field's monthly output had reached 617,230 barrels, and for the entire year this still less than two-year-old field marketed more than four million barrels.

The year's operations were interrupted by the episode of Atlantic No. 3 running wild from the latter part of March until fire broke out on 6th



September. The fire was extinguished after only 59 hours and the well was eventually killed. Its control prepared the way for early resumption of normal operations in the rest of the field.

On 14th May the entire field was shut down by order of the Petroleum and Natural Gas Conservation Board in order that the whole of the transportation facilities, including the pipeline, might be made available for the removal of the uncontrolled flow from Atlantic No. 3 which at one time reached as high as 14,000 barrels a day. But by 5th June the situation was sufficiently in hand to permit resumption of production from all wells, but at reduced quotas.

Notwithstanding this contretemps the daily average of the field stood in August at 18,811 barrels. It was anticipated at that time that mastery over the runaway well would be followed by some kind of statistical illusion which would appear to show a decline. If any such phenomenon actually did occur it was quickly overcome by the completion of new wells and the release of deferred deliveries, for the September output was less than in August by only 18 percent. By October production had almost overtaken the existing field record, by November it had made a new high of 20,574 barrels per day and for the year yielded more than four and a half million barrels.

Redwater

It is not to detract from the now proven wealth of the Leduc field to say that it owed its sensationalism in 1947, and inherits much of it to this day, to the fact that its discovery came at a time when dwindling production was causing no little uneasiness. Under similar circumstances the Redwater field might have been no less spectacular. It is now established that its wealth of oil should be even greater than that of Leduc. The discovery well (Imperial-Redwater No. 1) was completed as recently as September last with an initial potential of 1,795 barrels daily. Thereafter until the end of the year Imperial completed two more and, in testing the northerly limit while at the same time exploring to the southwest of the Discovery, got one dry hole.

As compared with Imperial-Leduc No. 1 which inaugurated that field, the

thickness of the producing zone at Imperial-Redwater No. 1 was found to be 146 feet or about four times that of the former.

Before the end of the year an Anglo-Canadian-Home team, a British American, Western Leaseholds and a team of Pacific Petroleum, Sun Ray, Princess and Max Bell associates entered the field and in the first few days of 1949 Anglo-Canadian-Home and the Pacific Petroleum team had established the fact that their acreage was "proven" as Nos. 1, 2 and 3 of the former and No. 1 of the latter approached production.

In October, the first statistical month in the life of the field, it produced 8,772 barrels, in November 11,137 and in December 16,966, representing a daily average of 400 barrels with still only two operating wells.

Turner Valley

The Turner Valley field, in spite of its shrinking output, continues to contribute about 40 percent of Alberta's oil. The decline which began in 1942 continued, however, through 1948. The latter year's production was 4,900,739 barrels as compared with 5,449,575 barrels in 1947. This will be seen to be a decline of just under 10 percent, but it will be observed also that the shrinkage between 1946 and 1947 was 14.47 percent.

Any impression that the venerable Valley is deteriorating into a graveyard of dead and abandoned wells would be quite erroneous. During 1948 the footage of drilling in this field amounted to almost 70,000 and six new wells were brought into production. These were Royalite 73, Royalite-Lowery 8, and Home-Millarville 30, 31, 32 and 33. Royalite 73 was a recompletion, discovering a deeper producing horizon. Three other wells completed in 1948 were failures and one was still testing.



**Turner Valley
Scrubbing Plant**

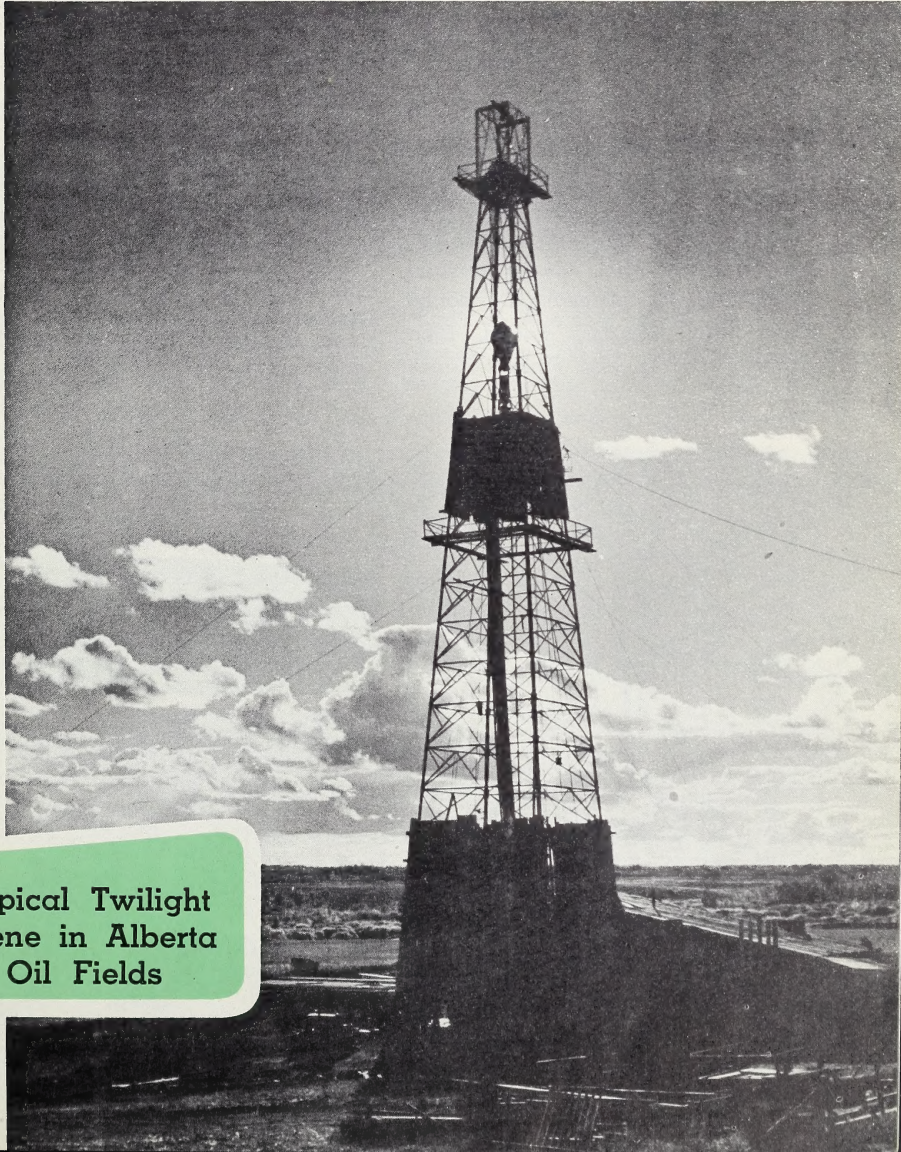
Lloydminster

Without a rival in the heavy oil field and third in barrelage amongst all Alberta fields is Lloydminster. The area is notable for its heavy asphaltic oil, and until now has not been a competitor with other fields in the "white" fuel markets. Oil from this field has been successfully used for oil burning locomotives, and the market will be greatly enlarged by the railways' decision, early in 1949, to convert more coal burners to oil burners.

The field straddles the Alberta-Saskatchewan border and for statistical purposes the Saskatchewan side is usually grouped with the Lone Rock field in that province. It will celebrate its tenth anniversary in 1949 — ten years since it made its debut with an annual production of 348 barrels. Pro-

duction from the Alberta side in 1948 was 648,055 barrels. (a)

(a) The figures shown in Table E are supplied, regarding the Alberta side, by the Alberta Petroleum and Natural Gas Conservation Board and, regarding the Saskatchewan side, by the Saskatchewan Government Department of Natural Resources and Industrial Development, Regina, Sask.



Typical Twilight
Scene in Alberta
Oil Fields

Princess

Development which took place in the Princess field during the first half of 1948, when the daily average was 486 barrels, was consistently maintained

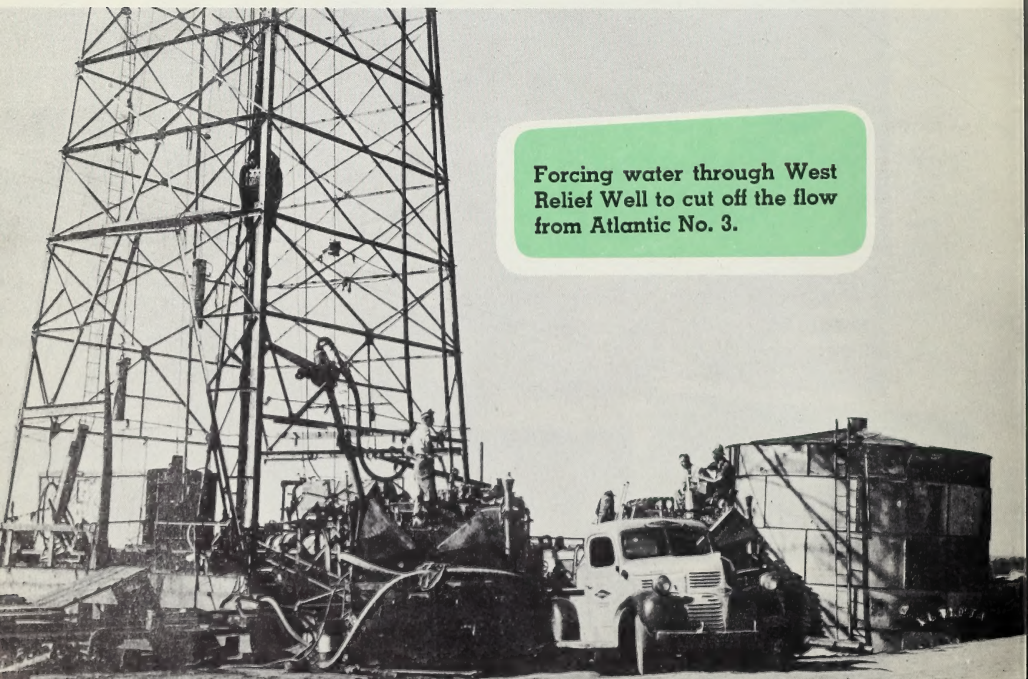
during the rest of the year. The daily average for the second half was 572 barrels, comparing with a daily average of only 293 barrels for the whole of the preceding year.

Other Fields

Performance of fields other than Turner Valley and Leduc is shown in Table D. There are fourteen fields under this heading, namely, Taber, Conrad, Princess, Lloydminster, Vermilion, Wainwright, Redwater and, classified as Miscellaneous, Del Bonita, Twin River, Jumping Pound, Dina, Armena, Brooks and Pincher Creek.

With unimportant exceptions all show increased production over 1947.

Statistics from "other" fields for 1947 showed production amounting to 1,359,709. But this included the Leduc field's contribution of 372,427 barrels. After subtracting this the 1947 production is 987,282. Twelve months' production from the same fields (plus three months of Redwater) in 1948 amounted to 1,415,473 barrels.



Forcing water through West Relief Well to cut off the flow from Atlantic No. 3.

DRILLING (a)

There is probably no better indication of the pace of exploration in any oil fields than the footage drilled. During 1948 rotary bits drilled 1,663,687 feet into the earth as compared with

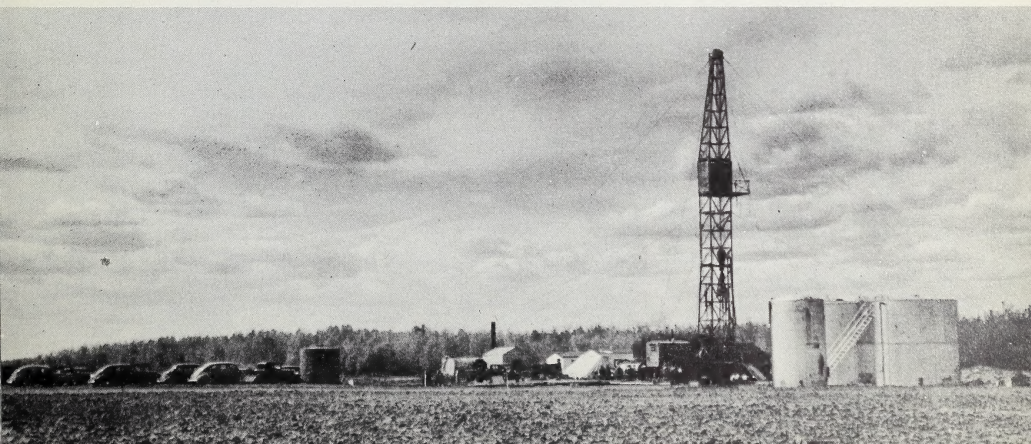
882,358 feet in the preceding year and 401,920 the year before. Previously the record year had been 1944 when the footage was 597,828. As a matter of interest, the 1948 footage approximates the airline distances from Edmonton to Cardston, Montreal to North Bay or New York to Buffalo.

(a) All figures given are "preliminary".

REVENUE TO PRIMARY PRODUCERS

For 1948 revenue to Alberta crude oil producers amounted to \$35,127,751. Before 1947 the record revenue year was 1943 when it amounted to \$15,724,518. Following that year revenue continued to shrink in sympathy with falling production until 1947 when, stimulated by higher prices and in spite of production being at its lowest in eight years, it reached a new high point at \$18,078,907.

Early in December of 1948 prices of crude oil were cut by Imperial, largest operator in the Alberta fields, to "permit", said President H. H. Hewetson, "Alberta production to compete with economic sources of U.S. crude wherever supplies from these sources impinge on the Prairie market." Oilfields most affected were Leduc, Redwater, Woodbend and Turner Valley, but in sympathy with the Turner

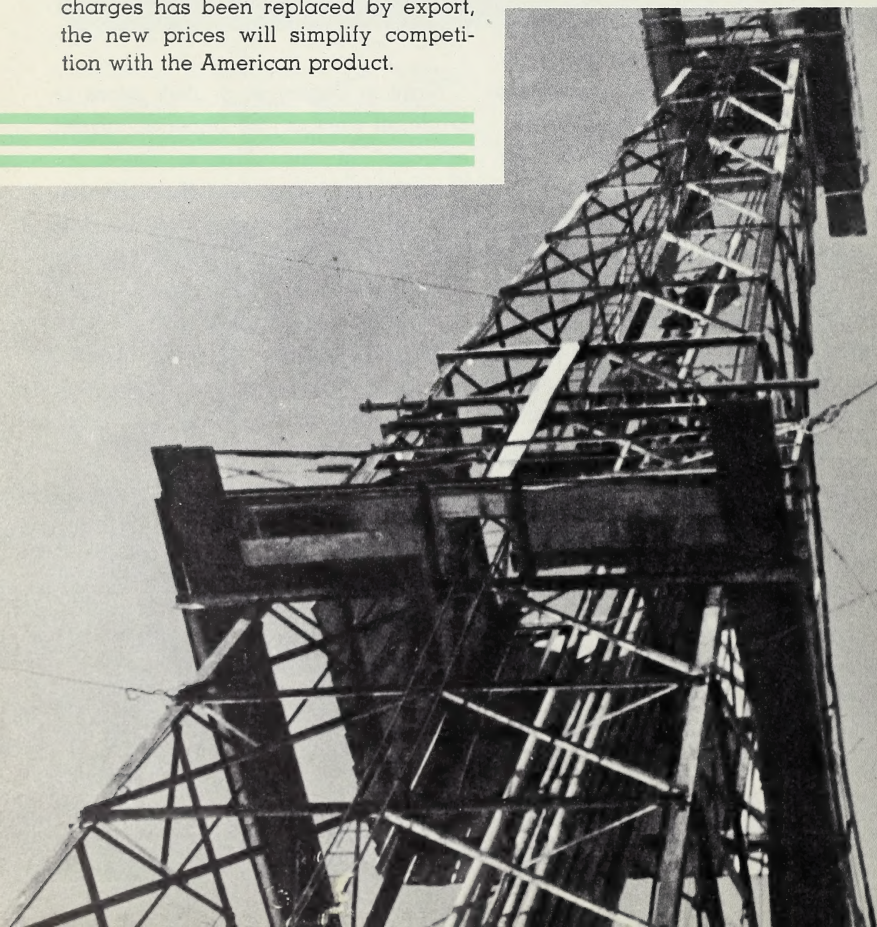


Valley situation with which they are linked Taber, Conrad, Princess and Bantry field prices were also affected. Reduction in the northern fields whose economic centre is Leduc was 52 cents per barrel and that in the Turner Valley and related fields ranged around 43 cents. The adjusted prices in the Leduc-Woodbend field therefore became \$2.95 per barrel for 38 - 40 gravity API oil and those in the Redwater field about \$2.68 for 34 - 35 gravity oil. The Turner Valley field prices ranged between \$3.09 for 33° gravity and \$3.71 for 64° gravity oil.

It is contended that when the importation of U.S. oil with all its accretions of freight, customs and other charges has been replaced by export, the new prices will simplify competition with the American product.

NATURAL GAS CONSUMPTION

The utility market for 1948 in Alberta was 38,350,808 Mcf compared with 33,353,314 Mcf in 1947. This does not include fuel in oil fields nor surplus gas produced as a by-product of oil.



Canadian OIL PRODUCTION

Alberta continued to lead the Canadian oil output in 1948, contributing

some 90 percent of the total. But Canadian production itself was 57 percent more than that of 1947 as the following figures of the Dominion Bureau of Statistics will show:

	1947		1948 (a)	
	bbl.	\$	bbl.	\$
New Brunswick.....	23,128	32,379	20,823	31,235
Ontario	130,135	351,364	174,290	463,611
Saskatchewan	534,804	598,980	865,715	995,570
Alberta	6,809,284	18,078,907	10,660,000	34,538,400
Northwest Territories.....	231,844	227,207	377,338	830,143
	7,729,285	19,288,837	12,098,166	36,858,959

(a) Preliminary estimates.

The Dominion Bureau of Statistics' figures are arrived at from a somewhat different basis than those of the Alberta Petroleum and Natural Gas Conservation Board; hence any seeming discrepancy between the foregoing and other Alberta statistics quoted in these pages. It will be observed that only New Brunswick, in 1948 as in 1947, continues to decline. Exploration is proceeding in British Columbia, Manitoba and Quebec although these prov-

inces do not yet figure in production statistics.

A notable step was taken at the fifth conference of provincial ministers of mines held at Jasper Park, Alberta, in September. This was the formation of the Continuing Interprovincial Petroleum and Natural Gas Committee with representation from each of eight provinces and from the industry. The Committee's function will be the specialized study of all oil and gas matters throughout the Dominion.



The world oil situation has undergone remarkable changes since a year ago. During most of 1948 there was a scarcity of oil, but toward the end of the year and with the beginning of 1949 a shift in this situation began to be perceptible.

The lean years prompted a drive for greater production. This appears now to have been almost alarmingly successful, for there are statistics to show that world oil production was greater than in 1947 by 12 per cent and by 71 percent than in 1938. Canadian production was double that of the preceding year, and 90 percent of this was contributed by Alberta. Alberta's own production was greater in 1948 than in 1947 by 61 percent.

The Near East, led by the Saudi Arabian fields, produced 34 percent more, the United States ten percent more, Venezuela twelve and Mexico four. The situation is further aggravated by a diminished demand from certain markets, notably Europe and the eastern United States where a mild winter lowered the need for heating

fuel. In Europe, furthermore, it is found that oil burners are being extensively converted into coal burners.

It seems probable that the United States imports from the Near East will be materially curtailed in 1949 as an initial step toward North American self-sufficiency.

Conclusion

The Alberta oil situation is now a microcosm of the world situation; that is to say, the scarcity of the post-war years has become converted into repletion.

In 1948, as been noted, Alberta production was greater than in 1947 by 61 percent. Some idea of the magnitude of this increase in the world picture may be gathered from the fact that the largest increase in any of the world's strategical oil centres was that of Saudi Arabia, but there it amounted only to 34 percent. In the United States, which usually dominates the petroleum scene, 1948 production was greater than 1947 by only ten percent. In 1947 United States production registered one of its largest gains then on record at 6.9 percent over the previous peak year, 1946.



But so rapidly has the development of Alberta oil fields progressed during the past year that the problem is no longer one of production but of its transportation and processing. Mr. H. H. Hewetson, president of Imperial Oil Limited, has predicted that his company's pipeline project between Edmonton and Regina will be in operation by 1950, but in the meantime the volume of oil — twice the output of a year earlier—is greater than the refining facilities. In other words, the Prairies "self-sufficiency" in oil, which even as recently as last autumn was being hopefully predicted as a possibility within a few years, is already near to the point of becoming an accomplished fact.

Apart from these twin problems, certain factors to which allusion is made under the heading of World Oil have made themselves felt in Alberta. But whereas a mild winter lowered the demand for oil fuel in the East, the winter of 1948-9 in British Columbia

was exceptionally severe. Furthermore, gradual withdrawal of the mills to fields farther from Vancouver has diminished the supply of sawdust as fuel. But the sawdust burner in its heyday cut so severely into the market for coal that there were insufficient stocks to meet the demand for the latter, in which British Columbia was never rich at any time.

One of the results of the foregoing was an extensive resort to oil-burning heating appliances, but this has been found to be of little or no benefit whatever to the Alberta oilfields since, so long as the "mountain differential" remains, the Vancouver consumer can import his petroleum more economically from the faraway oil fields of Peru than from the near-by fields of Alberta.

But let it not be supposed that there will be any slowing up of the tempo of exploration and development in Alberta. Imperial Oil Limited, says its



LEDUC-NISKU PIPE LINE

president, expects to spend some \$30 millions on Alberta oil development in 1949, and Imperial is only one (albeit the largest) of the operators in the field.

The 1948 story of Alberta oil is a more cheerful chapter than it has been possible to write since 1942. From that year until late in 1947 the record was one of shrinking production.

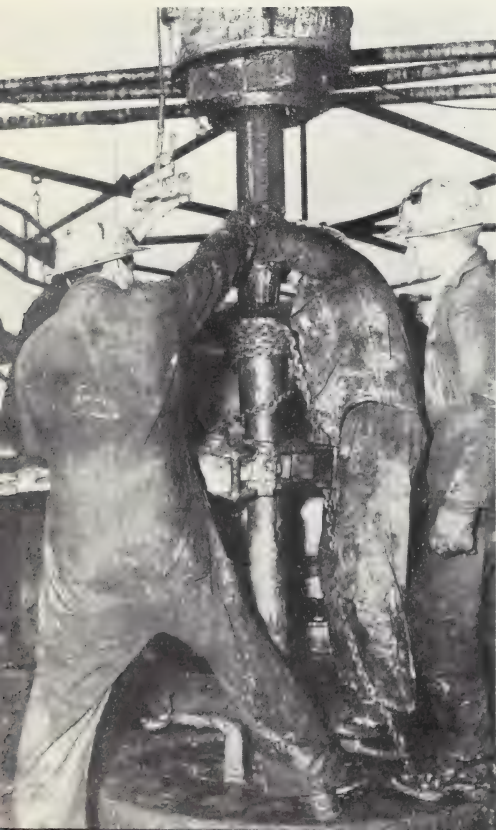
The turn of the tide came in October of that year when the output of the new Leduc field really began to make itself felt. Before February, 1947, the Prairie around the town of Leduc had been a fertile farming area; suddenly it was transmuted into a potentially major oilfield giving an average of 261 barrels daily. From then on production continued consistently to increase,

swollen rather than diminished by the eccentric behaviour of Atlantic No. 3, and by the end of 1948 the daily average barrelage had attained to over twenty thousand.

But the Leduc field was only the largest and most sensational of the discoveries — sensational because it was the long sought replacement for the shrinking Turner Valley. Contemporaneously with its exploration smaller fields were being developed at accelerated pace and exploration was being pressed in every part of Alberta. That some of this reaped meagre or no reward was only to be expected, but elsewhere it resulted in such potentially major fields as Redwater and Schoepp.

The net effect on production was an increase from less than seven million barrels in 1947 to almost eleven millions in 1948 and the disappearance of those disturbing "minus" signs from the Changes columns in the statistical tables.

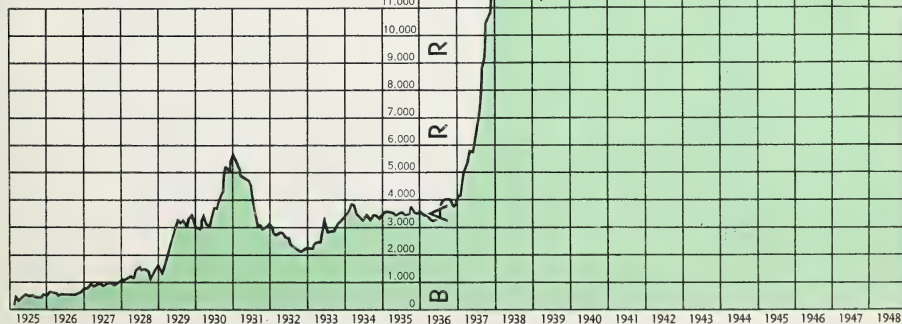
Given then a 60 percent increase in production in a year, and that exploration will be carried out without pause for any reason now foreseeable, one can only conjecture on what the Alberta oil harvest will be in 1949. For him who is curious enough to attempt the calculation let it be predicted that the daily average at the time of this writing (March) is over 50,000 barrels.



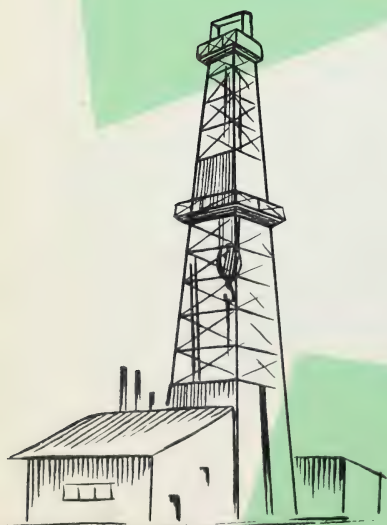
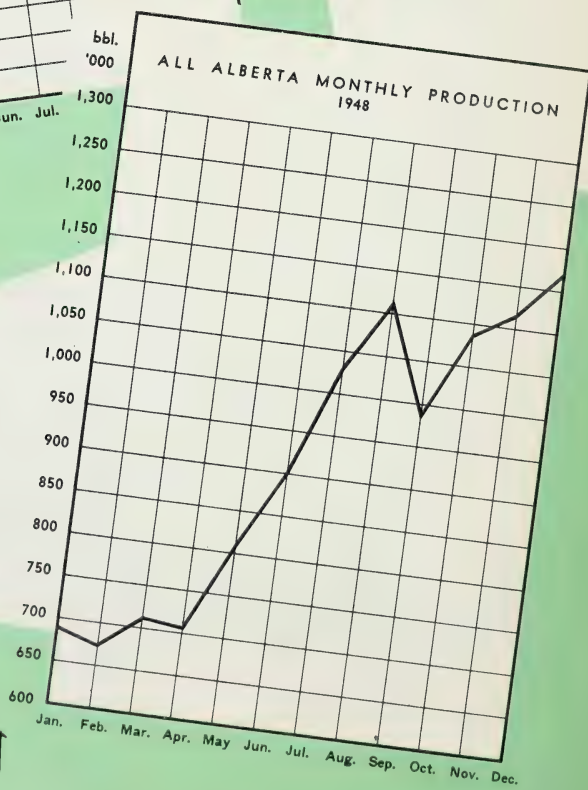


ALBERTA OIL PRODUCTION

YEAR	BARRELS
1944	8,788,726
1945	8,055,440
1946	7,137,693
1947	6,809,284
1948	10,973,583



DEPARTMENT OF LANDS AND MINES EDMONTON JANUARY 1948



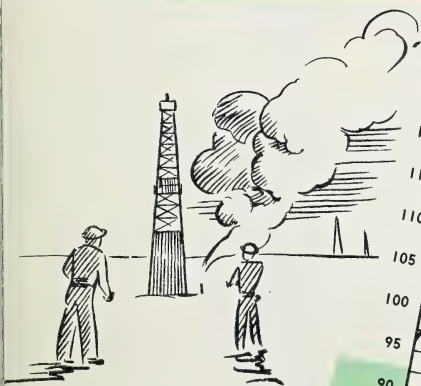
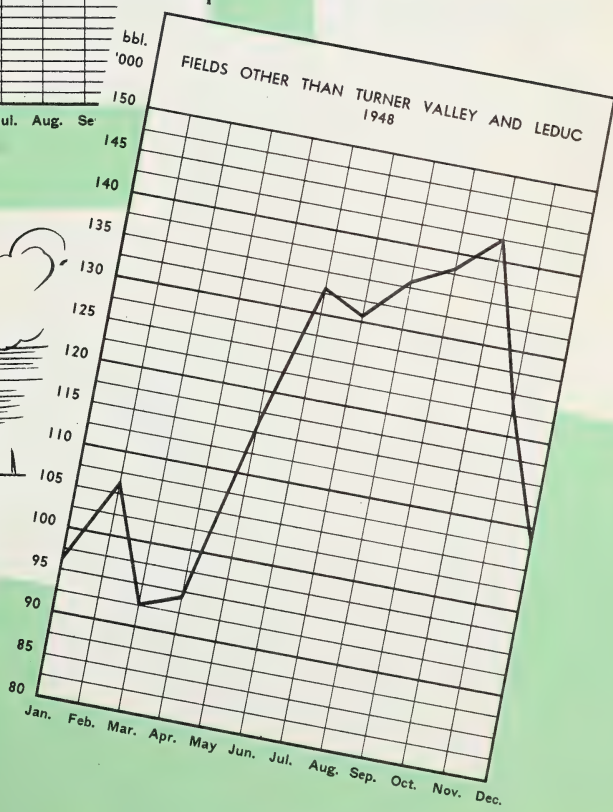
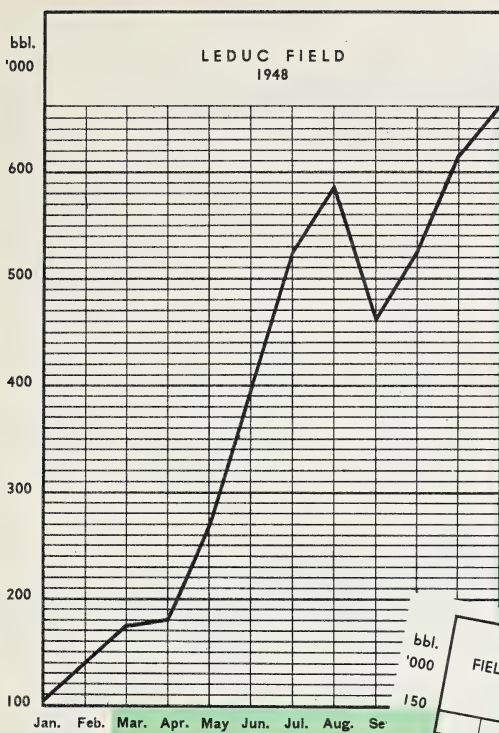


Table A
ALBERTA OIL PRODUCTION

(In barrels of 35 imperial gallons)

			Changes		Daily Averages	
			bbl	percent	1947	1948
January	563,172	687,447	124,275	22	18,167	22,076
February	504,847	665,724	160,877	32	18,030	22,956
March	542,175	709,099	166,924	31	17,490	22,874
April	523,960	702,688	178,728	34	17,465	23,423
May	560,579	804,531	243,952	44	18,083	25,953
June	540,720	900,508	359,788	66	18,024	30,017
July	545,039	1,034,437	489,398	89	17,582	33,369
August	554,650	1,104,113	549,463	99	17,892	35,607
September	557,357	978,018	420,661	76	18,579	32,601
October	618,777	1,076,512	457,735	74	19,961	34,726
November	627,113	1,139,160	512,047	82	20,904	37,972
December	670,895	1,171,346	500,451	74	21,642	37,785
Totals	6,809,284	10,973,583	4,164,299	61	18,656	29,982

Table B
TURNER VALLEY PRODUCTION

	Limestone Zone	Shallow Zone	Natural Gasoline	Total
1948				
January	424,786	324	41,319	466,429
February	379,738	323	39,237	419,298
March	401,687	323	41,678	443,688
April	386,318	354	43,073	429,745
May	385,779	298	34,817	420,894
June	340,601	277	30,427	371,305
July	345,289	334	32,112	377,735
August	351,456	258	32,618	384,332
September	346,366	215	32,490	379,071
October	366,869	257	41,078	408,204
November	349,816	255	47,106	397,177
December	349,983	178	52,700	402,861
Totals	4,428,688	3,396	468,655	4,900,739
Totals, 1947	5,017,292	5,058	427,225	5,449,575
Changes	— 588,604	— 1,662	+ 41,430	— 548,836
1947				
January	462,022	615	41,367	504,004
February	415,406	479	34,465	450,350
March	447,921	578	36,425	484,924
April	425,083	413	32,931	458,427
May	440,091	342	34,725	475,158
June	409,692	514	30,464	440,670
July	398,302	336	31,090	429,728
August	394,151	434	31,111	425,696
September	399,245	380	31,600	431,225
October	406,596	349	38,780	445,725
November	398,722	308	42,243	441,273
December	420,061	310	42,024	462,395
Totals	5,017,292	5,058	427,225	5,449,575

Table C

OIL PRODUCTION FROM THE LEDUC FIELD

(In barrels of 35 imperial gallons)

1948	Blairmore	D-2	D-3	Total
January.....	-----	35,324	86,973	122,297
February.....	-----	37,236	103,907	141,143
March.....	-----	52,275	121,055	173,330
April.....	-----	51,026	128,601	179,627
May.....	-----	13,311	254,930	268,241
June.....	-----	50,146	348,683	398,829
July.....	-----	68,157	456,781	524,938
August.....	2,447	81,411	499,299	583,157
September.....	5,080	93,576	362,920	461,576
October.....	6,215	118,090	401,592	525,897
November.....	11,771	127,437	478,022	617,230
December.....	15,442	135,219	510,465	661,106
Totals.....	40,035	863,208	3,753,228	4,657,371
1947.....	-----	-----	-----	372,427
Increase.....	-----	-----	-----	4,284,944

Table D

PRODUCTION FROM FIELDS OTHER THAN TURNER VALLEY AND LEDUC

	1947	1948	Increase or Decrease	
			bbl.	%
Taber.....	205,236	201,527	— 3,709	1.8
Conrad.....	202,929	179,627	— 23,302	11
Princess.....	106,920	189,712	+ 82,792	77
Lloydminster (Alberta side).....	304,236	648,055	+ 343,819	113
Vermilion.....	138,401	112,331	— 26,070	19
Wainwright.....	18,325	17,131	— 1,194	7
Redwater.....	-----	36,875 (a)	+ 36,875	--
Miscellaneous fields.....	11,235	30,215	+ 18,980	169
	987,282	1,415,473	+ 428,191	43

(a) Three months.



PRODUCTION FROM THE LLOYDMINSTER - LONE ROCK FIELD (c)

	ALBERTA SIDE		SASKATCHEWAN SIDE		LONE ROCK		COMBINED FIELD	
	Operating Wells	Barrels	Operating Wells	Barrels	Operating Wells	Barrels	Operating Wells	Barrels
January	43	35,532	56	50,759	16	20,450	115	106,741
February	48	48,009	59	48,514	18	17,511	125	114,034
March	44	34,696	59	41,661	18	15,003	121	91,360
April	54	37,239	59	33,394	18	5,155	135	75,788
May	65	52,740	59	39,633	21	17,701	145	110,074
June	72	65,515	61	51,898	24	31,887	157	149,300
July	75	71,872	65	59,166	26	37,598	166	168,636
August	74	70,978	72	57,433	31	36,209	177	164,620
September	82	75,204	68	48,685	34	31,849	184	155,738
October	80	68,185	74	45,768	39	29,507	193	143,460
November	68	53,172	67	44,979	36	34,039 (a)	171	132,190
December	47	34,913	58	26,911	34	20,396 (b)	139	82,220
Totals		648,055		548,801		297,305		1,494,161

ANNUAL TOTALS

1939	348	---	---	348
1940	1,648	---	331	1,979
1941	416	---	---	416
1942	477	---	---	477
1943	2,640	---	---	2,640
1944	6,296	---	---	6,296
1945	28,321	---	16,507	44,828
1946	76,187	---	136,874	213,061
1947	304,236	---	535,034	839,270
1948	648,055	---	548,801	1,494,161
Totals	1,068,624	---	1,237,547	2,603,476

(a) Includes Dina, 136 bbl.

(b) Includes Dina, 643 bbl.

(c) See footnote, page 5.

Table F

ANNUAL OIL PRODUCTION TOTALS

1914 TO 1948 INCLUSIVE
(In barrels of 35 imperial gallons)

1914-21	56,675	Brought Forward	9,674,103
1922	15,796	1936	1,320,428
1923	10,003	1937	2,796,874
1924	17,749	1938	6,743,101
1925	180,885	1939	7,543,492
1926	219,598	1940	8,495,207
1927	332,312	1941	9,908,643
1928	489,532	1942	10,136,296
1929	999,523	1943	9,674,548
1930	1,436,259	1944	8,788,726
1931	1,454,816	1945	8,055,440
1932	918,154	1946	7,138,532
1933	1,012,784	1947	6,809,284
1934	1,266,049	1948	10,973,583
1935	1,263,968		
Carried Forward	9,674,103		108,108,257

FOOTAGE OF WELLS DRILLED, 1948 (α)

	Leduc 1948	Turner Valley 1948	Other Areas 1948	Alberta Total 1948	Alberta Total 1947
January	39,623	6,422	21,937	67,982	24,991
February	55,731	8,526	22,168	86,425	25,309
March	59,552	9,871	43,121	112,544	27,284
April	71,434	9,345	32,885	113,664	31,448
May	42,854	8,211	32,505	83,570	78,199
June	112,698	6,049	61,448	180,195	100,830
July	76,760	4,371	66,287	147,418	101,706
August	95,972	2,326	97,485	195,783	109,781
September	103,120	685	71,453	175,258	90,802
October	98,327	3,232	90,615	192,174	115,026
November	89,483	5,028	83,617	178,128	90,889
December	55,852	5,848	68,766	130,466	86,193
Totals	901,406	69,914	692,287	1,663,607	882,358

HISTORICAL SUMMARY OF DRILLING

Year	Leduc	Turner Valley	Other Areas	Totals
Prior to 1927		115,391	532,241	647,632
1927		53,340	31,626	84,966
1928		111,160	56,380	167,540
1929		240,020	130,577	370,597
1930		123,583	105,751	229,334
1931		61,939	54,613	116,552
1932		13,096	19,525	32,621
1933		51,806	20,043	71,849
1934		78,278	17,946	96,224
1935		27,462	33,011	60,473
1936		52,470	46,145	98,615
1937		245,531	46,423	291,954
1938		303,112	60,180	363,292
1939		281,274	93,013	374,287
1940		297,018	72,779	369,797
1941		377,860	113,410	491,270
1942		348,772	160,915	509,687
1943		244,535	243,399	487,934
1944		266,145	331,683	597,828
1945		159,049	384,388	543,437
1946		77,997	323,923	401,920
1947	119,787	78,338	684,232	882,358
1948 (α)	901,316	69,814	692,457	1,663,687
Totals	1,021,103	3,678,090	4,254,660	8,953,854

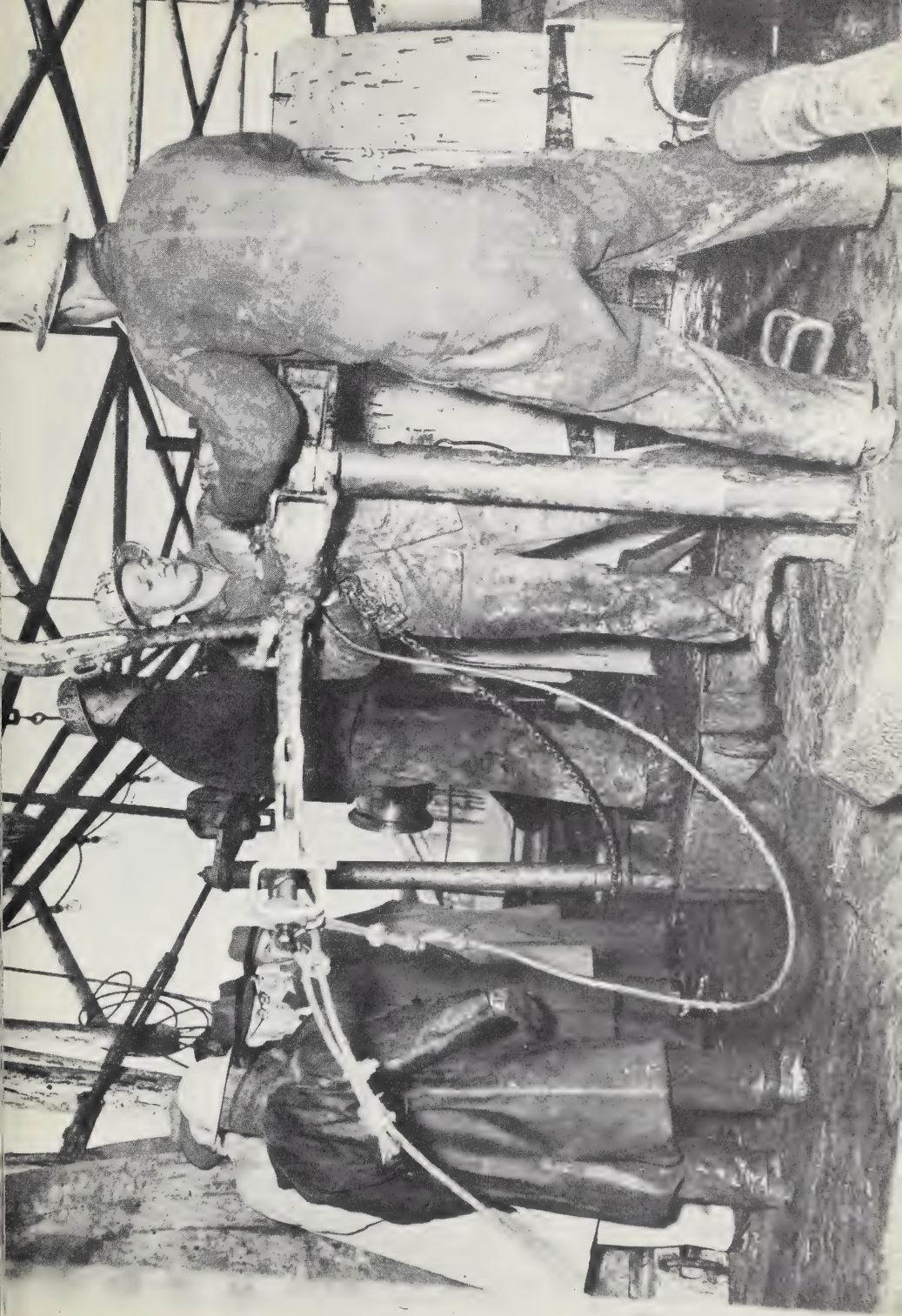
(α) Preliminary figures.

ALBERTA CUMULATIVE OIL PRODUCTION TABLE BY CALENDAR YEARS

(Quantities in Barrels of 35 Imperial Gallons)

Figures in light face represent annual totals, and in **black face** type the cumulative totals up to the end of the calendar year shown in the column in which they appear.

Calendar Years	TURNER VALLEY				LEDUC				REDWATER	
	CRUDE OIL PRODUCTION		Natural Gasoline Recovered	Turner Valley Totals	Blairmore		D-2 Zone	D-3 Zone		Leduc Totals
	Shallow Zone	Limestone Zone								
1914-21	56,599	56,599	76	56,675	(a)	56,675				
1922	6,559	63,158		15,796	72,471					
1923	1,943	65,101		10,003	82,474					
1924	2,932	68,033	1,689	13,128	30,501	17,749				
1925	2,926	70,959	169,008	8,951	39,452	180,885				
1926	2,609	73,568	203,725	7,283	46,735	213,617				
1927	38,808	112,376	284,595	659,017	52,589	329,257				
1928	70,910	183,286	410,448	1,069,465	52,589	481,358				
1929	73,181	256,467	908,411	1,977,876	52,589	981,592				
1930	50,897	307,364	1,316,102	3,293,978	52,589	1,366,999				
1931	29,936	334,300	1,345,310	4,639,288	52,589	1,372,246				
1932	21,757	356,057	854,517	5,493,805	52,589	876,274				
1933	23,915	379,972	766,755	6,260,560	52,589	976,451				
1934	22,307	402,279	796,140	7,056,700	652,694	1,232,711				
1935	19,903	421,182	711,451	7,768,151	933,708	1,227,035				
1936	13,011	434,193	671,948	8,440,099	1,062,627	1,287,319				
1937	10,589	444,782	2,098,970	10,539,069	1,392,755	2,766,728				
1938	9,192	453,974	6,150,512	16,689,581	2,940,338	6,691,138				
1939	8,431	462,405	7,251,063	23,940,644	3,237,125	7,556,281				
1940	7,309	469,714	8,173,016	32,113,660	3,511,297	8,454,497				
1941	6,014	475,728	9,531,207	41,644,867	3,804,419	9,830,343				
1942	5,806	481,534	9,695,913	51,340,780	4,106,635	10,003,935				
1943	4,865	486,399	9,898,663	60,327,443	4,567,804	9,452,697				
1944	3,209	498,608	7,874,919	68,207,362	4,481,866	8,326,314				
1945	3,392	493,540	7,005,589	75,207,951	5,428,530	7,422,061				
1946	8,918	502,428	5,928,444	81,136,395	5,862,740	6,371,572				
1947	5,058	507,516	5,017,292	86,153,687	6,289,965	5,449,575				
1948	3,396	510,912	4,428,688	91,007,161	6,758,620	4,900,739	40,035	863,208	3,753,228	372,427
										372,427
										5,029,798
										36,875
										36,875



ALBERTA CUMULATIVE OIL PRODUCTION TABLE BY CALENDAR YEARS (Continued)

Calendar Years	PRINCESS Heavy Crude	LLOYD- MINSTER Heavy Crude	WAIN- WRIGHT Heavy Crude	VERMILION		CONRAD		TABER		MISCEL- LANEOUS	ALBERTA TOTALS		VALUATIONS		
				Heavy Crude	Heavy Crude	Heavy Crude	Heavy Crude	Heavy Crude	Heavy Crude		56,675	56,675	\$	218,200	\$
1914-21	--	--	--	--	--	--	--	--	--	--	--	56,675	56,675	\$	218,200
1922	--	--	--	--	--	--	--	--	--	--	--	15,796	72,741	64,047	282,247
1923	--	--	--	--	--	--	--	--	--	--	--	10,003	82,474	41,333	323,580
1924	--	--	--	--	--	--	--	--	--	--	--	17,749	100,223	88,095	411,675
1925	--	--	--	--	--	--	--	--	--	--	--	180,885	281,108	717,271	1,128,946
1926	--	--	--	--	--	--	--	--	--	--	--	219,598	500,706	914,707	2,043,653
1927	--	--	5,981	5,981	--	--	--	--	--	529	529	332,312	833,018	1,529,477	3,573,130
1928	--	--	2,526	8,507	--	--	--	--	--	222	751	489,532	1,322,550	1,727,824	5,300,954
1929	--	--	7,952	16,459	--	--	--	--	--	5,599	6,350	999,523	2,322,073	3,424,021	8,724,975
1930	--	--	12,332	28,791	--	--	--	--	--	59,521	65,871	1,436,259	3,758,332	4,557,473	13,282,448
1931	--	--	9,739	38,530	--	--	--	--	--	75,428	141,299	1,454,816	5,213,148	3,977,788	17,260,236
1932	--	--	7,142	45,672	--	--	--	--	--	34,877	176,176	918,154	6,131,302	2,606,907	19,867,143
1933	--	--	7,003	52,675	--	--	--	--	--	31,057	207,233	1,012,784	7,144,086	2,694,310	22,561,453
1934	--	--	5,276	57,951	--	--	--	--	--	21,499	228,732	1,266,049	8,410,135	3,031,446	25,592,899
1935	--	--	11,779	69,730	--	--	--	--	--	22,295	251,027	1,263,968	9,674,103	2,856,029	28,448,928
1936	--	--	14,638	84,368	--	--	--	--	--	18,052	269,079	1,320,428	10,994,531	2,918,730	31,367,658
1937	--	--	15,057	99,425	--	--	--	--	600	600	15,432	2,796,874	13,791,405	4,913,960	36,281,618
1938	--	--	13,459	112,884	--	--	--	--	15,098	15,698	16,087	300,598	20,534,506	8,639,488	44,921,106
1939	515	348	12,965	125,869	--	--	--	--	--	19,418	23,265	323,863	7,593,492	9,289,580	54,210,686
1940	--	515	1,648	137,493	202	202	--	--	3,720	19,418	20,718	344,581	36,623,205	10,503,249	64,713,935
1941	19,587	416	1,996	7,527	145,020	10,817	11,019	--	5,600	25,018	18,913	363,494	46,531,848	13,809,708	78,523,643
1942	10,478	477	2,899	14,510	171,263	56,819	89,889	--	29,819	54,837	20,258	383,752	56,668,144	15,517,266	94,040,909
1943	340	2,640	5,529	18,136	189,359	93,258	183,147	--	88,735	143,572	18,742	402,494	66,342,692	15,724,518	109,765,427
1944	13,815	6,296	11,825	17,154	206,553	234,603	417,750	24,733	148,638	292,210	17,173	419,667	75,131,418	14,468,061	124,233,488
1945	63,377	108,112	40,146	16,472	233,025	238,358	656,108	168,429	135,000	427,210	8,155	427,822	83,186,858	13,106,928	137,340,416
1946	64,953	173,065	116,333	15,114	238,139	183,946	840,054	212,645	206,086	633,296	7,190	435,012	90,324,551	14,348,069	151,688,485
1947	106,920	279,985	420,569	18,325	256,464	138,401	978,455	202,929	594,003	839,371	11,235	446,247	97,133,965	18,078,907	169,767,392
1948	189,712	469,697	1,068,624	17,131	273,595	112,331	1,090,786	179,627	763,630	1,040,898	30,215	476,462	108,107,548	35,127,751	204,995,143

